REMARKS

By this amendment, claims 1-4, 6-13, and 15-24 are pending, of which claims 5 and 14 were previously canceled without prejudice or disclaimer, claim 19 is withdrawn from consideration pursuant to the provisions of 37 C.F.R. §1.142(b), and claims 1, 9, and 10 are currently amended. No new matter is introduced.

The Final Office Action mailed May 26, 2010 rejected claims 1-4, 6-8, 20-22, and 24 under 35 U.S.C. §101 as directed to non-statutory subject matter, claims 1-4, 6-13, 15-18, and 20-24 under 35 U.S.C. §112, second paragraph, as being indefinite, claims 1-3, 9-12, and 24, alternatively under 35 U.S.C. §102(e) and/or 35 U.S.C. §103(a) as anticipated by and/or obvious over *Wall et al.* (US 7,043,736)("*Wall*"), and claims 4, 6-8, 13, 15-18, and 20-23 as obvious under 35 U.S.C. §103(a) based on *Wall et al.* (US 7,043,736)("*Wall*") in view of *Adler* (US 2002/0169658).

The rejection of claims 1-4, 6-8, 20-22, and 24 under 35 U.S.C. §101 is respectfully traversed.

The Examiner asserted that claim 1 is not a proper method claim because it is not tied to another statutory class and does not transform underlying subject matter, relying on *In re Bilski*, 88 USPQ2d 1385, 1391, and 1396 (Fed. Cir. 2008).

Respectfully, since the date of the Final Office Action, the U.S. Supreme Court has spoken on this issue in *Bilski et al. v. Kappos*, 561 U.S. ___ (2010). The Court made it clear that the term "process," within 35 U.S.C. §101, is **not required** to be tied to a machine or to transform an article, i.e., the Federal Circuit's machine-transformation test may not be the "sole test" for what constitutes a "process" within the meaning of 35 U.S.C. §101. The Supreme Court gives a wide berth to what may constitute statutory subject matter within the meaning of

35 U.S.C. §101. So long as the subject matter does not fall under one of the judicially determined exceptions, *viz.,* law of nature, abstract idea, or mathematical algorithm, there would appear to be no rational basis on which the Examiner can reject the present claims under 35 U.S.C. §101.

Moreover, even under the more restrictive machine-transformation test of *In re Bilski,* the instant claimed invention constitutes statutory subject matter since it clearly recites a method performed "by one or more processors programmed by a set of instructions." Clearly, computer processors are statutory and methods employing such physical elements to perform the claimed method pass muster under 35 U.S.C. § 101.

The claimed methods are clearly tied to another statutory class, *viz.,* a machine, in the recitation of a processor. Further, the claimed methods clearly transform underlying subject matter by collecting data and transforming that data into a financial model by "generating a financial model with re-usable financial components based upon the collected data and programs." Accordingly, claims 1-4, 6-8, 20-22, and 24 are patentable under 35 U.S.C. § 101.

It is further noted that the claim analyzed by the court in the *Bilski* cases recited a "method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising" various steps. It is noteworthy that that claim, unlike the ones before the Examiner in the instant case, was not restricted to any apparatus or machine for implementing the recited method. Applicant's claims are restricted to methods being performed by " one or more processors." Claims directed to computers/processors are time-tested as to their statutory nature within the meaning of 35 U.S.C. § 101. They are, simply, **machines**. A computer is employed to automatically perform a series of steps, or algorithms, to implement certain processes in accordance with a program or set of instructions but it is a

"machine" nonetheless that performs the functions implementing the claimed method, i.e., a computer-implemented method.

Moreover, unlike the claims of concern in *Bilski*, the instant claims before the Examiner are not directed to a mere "business method" of "initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate …," "identifying market participants," and "initiating a series of transactions between said commodity provider and said market participants at a second fixed rate..." Rather, the instant claims actually transform collected data into an actual financial model in accordance with instructions performed by physical processors.

The Examiner further asserted that the recitation of "one or more processors" in the preamble of the claims is not enough as it is "a nominal recitation of another statutory class" (Final Office Action-page 4) and that the process steps recited in the body of the claim may be performed by a human operator alone. Applicant respectfully disagrees.

The process steps recited in the body of the claims, e.g., claim 1, must be performed by "one or more processors" by the very language of the claim, because the preamble recites that the method is "implemented by one or more processors programmed by a set of instructions to perform the steps of:" and then the steps that are performed by the processors are listed. Thus, the Examiner may not ignore the preamble, setting forth the requirement that the rest of the steps recited in the body of the claim are performed by at least one processor. Therefore, the recitation of "one or more processors" is not a "nominal recitation of another statutory class." The recitation that one or more processors perform all of the following listed steps is a short-hand version of reciting the processor in each and every step within the body of the claim but the result is the same, i.e., each and every step recited in the body of the claim is performed by at least one physical processor.

Moreover, the Examiner is, respectfully, wrong when she asserts that the process steps recited in the body of the claim "may be performed by a human operator alone." First, as noted previously, the very language of the claim taken as a whole requires one or more processors, not a human operator, to perform the process steps. Second, the very steps recited are not capable of being performed by a human operator alone. Clearly, no human can collect data "over a data network." No human is capable of "issuing functor requests through a workflow router." No human is capable of "receiving functor objects from users responsive to the functor requests." No human is capable of "generating a financial model with re-usable financial components based upon the collected data and programs."

In any event, in order to advance prosecution of this application, independent claims 1, 9, and 10 have been amended to specifically recite the "one or more processors" in each and every step and structural element of the claims.

Thus, for at least these reasons, the Examiner is respectfully requested to reconsider and to withdraw the rejection of claims 1-4, 6-8, 20-22, and 24 under 35 U.S.C. §101.

The rejection of claims 1-4, 6-13, 15-18, and 20-24 under 35 U.S.C. §112, second paragraph, is respectfully traversed.

The Examiner asserted that claims 1, 9, and 10 are "incomplete for omitting essential elements, essential steps and/or essential structural cooperative relationships of elements such omission amounting to a gap between the elements, the steps and/or the necessary structural connections" (Final Office Action-page 5).

In particular, the Examiner identifies associated mapping of a spreadsheet as "critical" to the performance of the disclosed invention and identifies the "novelty" of the invention as pertaining to "simulation," concluding that the limitations of claims 2, 3, and 4 are "critical" to

the inventions and "should be recited in the independent claim." Applicant respectfully disagrees.

Respectfully, it is Applicant, and not the Examiner, who determines what is "critical" and "novel" about the invention and this criticality or novelty is expressed in terms of what is claimed. Independent claim 1 recites the features deemed to constitute Applicant's invention as to the subject matter recited therein. Claims 2, 3, and 4, merely add additional features, such as limiting the collected data to data from a spreadsheet, thus adding additional features of the claimed invention, but each of claims 1, 2, 3, and 4 is complete in its own right.

The Examiner further asserted, "the model depends on the objects, classes for generation" (Final Office Action-page 5). In addition, the Examiner noted, at the top of page 6 of the Final Office Action, that it was unclear whether claims 2 and 3 are required together as part of a single invention or whether they are alternatives.

Respectfully, claims 2 and 3 recite different features of the invention, with claim 2 depending from claim 1 and reciting, "mapping content from a plurality of cells of the spreadsheet to a plurality of objects, wherein the content includes the data and programs for input into the financial model," and claim 3, also depending from claim 1, reciting, "mapping content including the data from a plurality of cells of the spreadsheet to one or more classes, wherein the class duplicates functionality of the spreadsheet if the class is used to create an object." There is nothing indefinite or ambiguous about these claims.

The Examiner also asserted, with regard to claims 1, 9, and 10, that the feature of "wherein the financial model supports user approval of selected ones of the financial components" raises the question of the limiting effect of the language since the "wherein" clause has no bearing or influence on the steps or acts performed. Applicant respectfully disagrees.

The "wherein" clause most definitely has an influence on the claimed steps since, in accordance with this clause, the user is permitted to approve or disapprove of selected financial components. Thus, the clause adds the feature, otherwise absent from the claim, that the financial model generated by the claimed method steps and system must be capable of supporting user approval of selected ones of the financial components. Clearly, any prior art system without such capability cannot meet the claim features. As such, the feature of "wherein the financial model supports user approval of selected ones of the financial components" clearly has a bearing and/or influence on the steps and/or acts performed. Claim 10 has been amended to recite "wherein the financial model is configured on the one or more processors to support user approval of selected ones of the financial components" and this phrase also clearly has a bearing and/or influence on the acts performed.

The Examiner further asserted, with regard to claims 1, 9, and 10, that there is a "disconnect" between the steps performed, particularly asserting that the generated financial model is not dependent on or related to the steps of "issuing functor requests through a workflow router to users for data and programs; and receiving functor objects from users responsive to the functor requests" because the "only thing the model requires is the 'collected data and programs'." Applicant respectfully disagrees.

It is clear from the claim language that the step of collecting data comprises two prongs; first, functor requests are issued "through a workflow router to users for data and programs" and, second, functor objects are received "from users responsive to the functor requests." Thus, data is collected by requesting data and programs from users and then receiving the functor objects responsive thereto. All of this information from the data and programs is used to generate the financial model.

Perhaps the Examiner is having a problem understanding the concept of a "functor." As explained in the previous response, a "functor" is a combination of data and program. As such, and in accordance with the claimed invention, rather than having the capability of responding to certain requests with merely data, users of the claimed invention may submit response objects which are combinations of code (program) and data. Thus, the user in Applicant's novel invention can respond with not only data but also a function defining how to use such data. Therefore, data is collected by requesting data and programs from users and then, responsive to the request, objects (programs and data) are received. The claims are clear on this and, respectfully, Applicant can find no "disconnect" or indefiniteness. However, in order to provide even more clarity, claims 1, 9, and 10 have been amended to recite "the collected **functor objects containing the data and programs**."

With regard to claims 2 and 11, the Examiner asserted that the "wherein" clause "has no bearing on [sic, or] influence of the steps or acts performed by the claimed invention. Applicant respectfully disagrees. By "mapping content from a plurality of cells of the spreadsheet to a plurality of objects," in accordance with the recited claimed invention, this clearly results in the mapped content including the data and programs for input into the financial model. Applicant cannot determine anything remotely indefinite in such language as the "wherein" clause clearly has a bearing or influence on the steps/acts claimed because the mapping step, for example, results in mapped content including the data and programs for input into the financial model.

With regard to claims 3 and 12, the Examiner asserted that "wherein the class duplicates functionality of the spreadsheet if the class is used to create an object" "has no bearing on [sic, or] influence of [sic, on] the steps or acts performed by the claimed invention." Applicant disagrees.

The wherein clause, being part of the claimed subject matter, does have a bearing on the steps or acts performed and must be considered by the Examiner in analyzing the claimed subject matter. The one or more classes to which the content from the spreadsheet cells is mapped duplicates functionality of the spreadsheet if the class is used to create an object. The wherein clause specifies a certain characteristic of the class(es), *viz.*, "class duplicates functionality of the spreadsheet if the class is used to create an object," and if any prior art does not disclose or suggest such a mapping of content including the data from a plurality of spreadsheet cells to one or more classes, "wherein the class duplicates functionality of the spreadsheet if the class is used to create an object," then that prior art simply does not disclose or suggest the instant claimed subject matter. The claims are definite, as is. Respectfully, the Examiner should not confuse breadth with indefiniteness.

With regard to claims 7 and 17, the Examiner asserted that "wherein the GUI supports options to format the report" " "has no bearing on [sic, or] influence of [sic, on] the steps or acts performed by the claimed invention." Applicant disagrees.

Respectfully, the Examiner is confused. It appears that the Examiner blindly copied the prior office action without regard to Applicant's last response and amendment since neither claim 7 nor claim 17 includes the wherein clause of which the Examiner complains.

With regard to claim 10, the Examiner asserted that the preamble relates to a "system" but that the "module" language is suggestive of software. Respectfully, Applicant finds nothing indefinite in the claims. Claim 10 is clear that the "system" comprises one or more processors and a modeling module. It can make no possible difference regarding definiteness whether the "modeling module" is embodied by hardware or software. Accordingly, claim 10 is definite, as is, as the person of ordinary skill in the art would understand the metes and bounds of the invention, as claimed, within the context of the present disclosure. Nevertheless, in order

to advance prosecution of the application, claim 10 has been amended to recite "a modeling module, **comprising at least one of the one or more processors**, configured to generate a financial model."

Accordingly, the Examiner is respectfully requested to reconsider and to withdraw the rejection of claims 1-4, 6-13, 15-18, and 20-24 under 35 U.S.C. §112, second paragraph.

The rejection of claims 1-3, 9-12, and 24, under 35 U.S.C. §102(e) /35 U.S.C. §103(a) is traversed.

Wall neither anticipates nor makes obvious the claimed invention for at least the following reasons.

Wall discloses nothing even remotely related to the claimed "functor objects." The Examiner cites, in *Wall*, the abstract, col. 1, lines 50-57; col. 2, lines 10-63; col. 3, lines 15-41; col. 4, lines 42-52; and col. 5, lines 17-34, as supposedly corresponding to this claim feature. However, a close inspection of *Wall* reveals a marked difference between the system disclosed therein and the instant claimed invention. The ultimate computations of interest are performed by the "emergent model" in *Wall*, whereas the ultimate computations in the claimed invention are performed by a generated financial model that supports user approval of selected components. The claimed invention and *Wall* differ greatly in their approach to building a model.

Moreover, the claimed functor request objects or functor objects are objects that store and transport other programs across the network as one feature. In contradistinction thereto, the objects in *Wall* are merely plain "objects" and have no relationship to the claimed functor request objects or functor objects. This is a major distinction and, for this reason alone, *Wall* does not anticipate or make obvious the claimed invention.

Further, the programs attached to the functor requests in claim 8, and the programs attached to functors in claim 1 are programs that are attached or designated at runtime by the user, *viz.*, "wherein the financial model supports **user approval** of selected ones of the financial components" (claim 1) and "a response object received from the second user responsive to the request object **conforming to a class interface specified by the first user**" (claim 8).

Whereas "data objects and/or functions" in *Wall* are actual structures that perform the computations of ultimate interest in the model or simulation, and are manually combined into an emergent model using references to link distributed objects, the functor requestor and the functor objects of the claimed invention cooperate to specify and transport "data and programs" which will perform the actual computations of ultimate interest once combined with the simulation framework. *Wall* clearly has no structure corresponding to the claimed functor requestor that would allow a user building a model to indicate formally to other users the types of objects that are needed to fulfill the premises of the model.

Wall, in fact, teaches away from the claimed invention. For example, in the abstract, *Wall* recites, "The emergent network of linked data objects and/or function objects are independently published to, and subscribed to, in a manner **free of a globally predefined network** of data objects and/or function objects, thereby generating the emergent model." This is in direct contrast to the claimed invention in which there is a predefined **simulation framework**. As amended, independent claims 1 and 9 recite, *inter alia*, "the one or more processors generating a financial model, **comprising a simulation framework linked to re-usable financial components** based upon the collected functor objects containing the data and programs," and independent claim 10 recites, *inter alia*, "a modeling module, comprising at least one of the one or more processors, configured to generate a financial model, **comprising a simulation framework linked to re-usable financial components** based upon the collected

functor objects containing the data and programs." Support for this feature may be found, for example, as element 300 in Figure 3 and corresponding portions of the specification, such as page 14, for example. By way of explanation, the simulation framework, as disclosed and claimed, includes functor request objects and functor objects and has, as its purpose, the abstraction of essential states and processes relevant for a target domain. The simulation framework provides a set of classes with pre-defined interrelationships that cooperate and assist in building the financial model. Framework classes are classified into broad categories, including entity state classes, operator classes, constraint classes, agent classes, functor requestor classes, and functor classes. Collectively, these classes are referred to as the "simulation framework." *Wall* neither teaches nor suggests such a "simulation framework" and, therefore, cannot anticipate or make obvious, the subject matter of claims 1-3, 9-12, and 24.

At least claims 2, 3, 11, and 12, directed to a "spreadsheet;" specifically, "mapping content from a plurality of cells of the spreadsheet to a plurality of objects, wherein the content includes the data and programs for input into the financial model" as in claim 2, "mapping content including the data from a plurality of cells of the spreadsheet to one or more classes, wherein the class duplicates functionality of the spreadsheet if the class is used to create an object," as in claim 3, "a spreadsheet-to-object mapper configured to map content from a plurality of cells of the spreadsheet to a plurality of objects, wherein the content includes the data and programs for input into the financial model," as in claim 11, and "a spreadsheet-to-class mapper configured to map content including the data from a plurality of cells of the spreadsheet to one or more classes, wherein the class duplicates functionality of the spreadsheet if the class is used to create an object," as in claim 12, are separately patentable.

Wall discloses no such "spreadsheet," as claimed. The "spreadsheet tool," described at col. 1, lines 47-50 of *Wall*, "can be used to build a financial model of a particular business

(system) to predict financial behavior, thus allowing a user to evaluate and choose among various solutions (designs)." However, nowhere in *Wall* is there any disclosure or suggestion of "**mapping content** from a plurality of cells of the spreadsheet to a plurality of objects, **wherein the content includes the data and programs for input into the financial model**" or "**mapping content** including the data from a plurality of cells of the spreadsheet to one or more classes, **wherein the class duplicates functionality of the spreadsheet if the class is used to create an object**," or "a **spreadsheet-to-object mapper** configured to **map content** from a plurality of cells of the spreadsheet to a plurality of objects, **wherein the content includes the data and programs for input into the financial model**," or "a **spreadsheet-to-class mapper** configured to **map content** including the data from a plurality of cells of the spreadsheet **to one or more classes, wherein the class duplicates functionality of the spreadsheet if the class is used to create an object**."

One advantage of the claimed spreadsheet-to-object mapper, as claimed, is that it enables spreadsheet users to add re-usable formulas to a simulation framework (e.g., claim 1: "a **simulation framework linked to re-usable financial components** based upon the collected functor objects containing the data and programs") without learning a programming language. *Wall* offers no such advantage because *Wall* fails to disclose either "a **simulation framework linked to re-usable financial components** based upon the **collected functor objects containing the data and programs**" or "**mapping content** from a plurality of cells of the spreadsheet to a plurality of objects, **wherein the content includes the data and programs for input into the financial model**."

Accordingly, withdrawal of the rejection of claims 1-3, 9-12, and 24 under 35 U.S.C. §102(e) /35 U.S.C. §103(a) is respectfully solicited.

The rejection of claims 4, 6-8, 13, 15-18, and 20-23 under 35 U.S.C. §103(a) is traversed.

The Examiner acknowledged that *Wall* fails to disclose outputting the financial model, providing a user with a plurality of input parameters including operators, dynamically receiving one of the input parameters from the user in support of a what-if analysis of the financial model, and generating a simulation result in response to the received input parameter for retrieval by the user over the data network. Yet, in spite of all of these shortcomings, the Examiner asserted that Adler discloses all of these features and that it would have been obvious to modify *Wall* to provide for all of these features because "one would have been motivated to assess the risks and rewards of alternative decisions and to identify the most promising strategy to pursue" (Final Office Action-page 13). Applicant respectfully disagrees.

Adler does not cure the deficiencies of *Wall*, previously argued, *Adler* is not combinable with *Wall* and, even if combined, the combination of references would not result in the claimed invention.

Since *Adler* does not cure the previously argued deficiencies of *Wall*, claims 4, 6-8, 13, 15-18, and 20-23 are allowable for this reason alone. To the extent *Adler* may be interpreted to disclose a simulation framework, it is not "a simulation framework **linked to re-usable financial components based upon the collected functor objects containing the data and programs,** wherein the financial model supports user approval of selected ones of the financial components," as claimed. There is no disclosure or suggestion in either *Wall* or *Adler* of functor requestors and functors, as claimed.

Moreover, *Wall* and *Adler* are not combinable as they, in fact, teach away from each other. A reference may be said to "teach away" when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference or would be led in a direction divergent from the path that was taken by the applicant. *In re*

Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). Since *Adler* requires a simulation framework, and *Wall* rejects "globally predefined network of data objects and/or function objects" (See, abstract, for example), the teachings of the applied references are incompatible with each other, discouraging persons of ordinary skill in the art from employing the teachings of *Adler* to follow the path set out in *Wall*. In fact, the teachings of *Wall*, rejecting "globally predefined network of data objects and/or function objects," would have led persons of ordinary skill in the art in a direction divergent from the path that was taken by the applicant.

Even if combined, the applied references would not result in the claimed invention. The Examiner's assertion that the references would be combined because "one would have been motivated to assess the risks and rewards of alternative decisions and to identify the most promising strategy to pursue" is not only a mere generalization, but falls far short of the "articulated reasoning with some rational underpinnings" required by the U.S. Supreme Court, *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). Such "articulated reasoning with some rational underpinnings" would require at least an explanation of what it is, in either reference or in common knowledge that would have led the person of ordinary skill in the art to modify something in *Wall* because of some teaching, whether in *Adler*, or elsewhere, in order to provide for the claimed invention. The Examiner asserted that making the combination is merely a matter of applying known elements according to known methods to yield predictable results. Applicant disagrees. There is nothing known, prior to Applicant's invention, about Applicant's claimed collection of data in a multi-user peer-to-peer collaborative environment over a data network by: issuing functor requests through a workflow router to users for data and programs; and receiving one or more functor objects from the users responsive to the functor requests, wherein a financial model, comprising a simulation framework linked to re-usable

financial components based upon the collected functor objects containing the data and programs, is generated, and there is clearly no evidence provided by the Examiner that it would have been obvious to further modify this subject matter, as in claim 4, wherein the steps of outputting the financial model, providing a user with a plurality of input parameters including operators, dynamically receiving one of the input parameters from the user in support of what-if analysis of the financial model, and generating a simulation result in response to the received input parameter for retrieval by the user over the data network, are provided.

Even if one were to take each object disclosed in *Adler* and provided those objects to the system of *Wall*, the claimed invention would not result because neither *Wall* nor *Adler* provides for anything corresponding, or even remotely similar, to the claimed functor requestors and functors. Moreover, the combination is improper because the simulations in *Adler*, being different from those in *Wall*, would not map well to the data-flow networks of *Wall*. The changing of a function in an emerging network in *Wall* entails stopping an object, starting a replacement object, and possibly re-linking the object with the network, along with some way of resetting the network. There is no way, in *Wall*, of grouping variant sets of data inputs, let alone programs and/or functions, as in the claimed invention.

For at least the reasons above, no *prima facie* case of obviousness has been established with regard to claims 4, 6-8, 13, 15-18, and 20-23. Accordingly, withdrawal of the rejection of claims 4, 6-8, 13, 15-18, and 20-23 under 35 U.S.C. §103(a) is respectfully solicited.

Therefore, the present application, as amended, overcomes the rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the

undersigned attorney at (703) 519-9952 so that such issues may be resolved as expeditiously as possible.

     To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made.   Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 504213 and please credit any excess fees to such deposit account.

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Respectfully Submitted,

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